



SEQUENCE LISTING

<110> Audonnet, Jean-Christophe

<120> Improved DNA Vaccines for Farm Animals, In particular bovines and procines

<130> 454313-3154.2

<140> 09/766,442

<141> 2001-01-16

<160> 106

<170> PatentIn version 3.0

<210> 1

<211> 40

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used to prepare modified plasmid pVR1020

<400> 1

gatctgcagc acgtgtctag aggatatcga attcgcggcc 40

<210> 2

<211> 40

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used to prepare modified plasmid pVR1020

<400> 2

gatccgcggc cgccaattcg atatcctcta gacacgtgct 40

<210> 3

<211> 20

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used to prepare plasmid pNS050

<400> 3

ttggggaccc ttgattgttc 20

<210> 4

<211> 21

<212> DNA

<213> Artificial sequence

09766442-000001

<210> 9
 <211> 51
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> oligonucleotide used to prepare fragment for generating plasmid p
 PB28

 <400> 9
 ctgcacgagc tccggttcta cgacattgac cgctgggtcaa gacggactga g 51

 <210> 10
 <211> 56
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> oligonucleotide used to prepare fragment for generating plasmid p
 PB28

 <400> 10
 gatcctcagt ccgtcttgac cacgcgggtca atgtcgtaga accggagctc gtgcag 56

 <210> 11
 <211> 39
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> primer used in amplification of modified form of BHV-1 gB gene

 <400> 11
 aaaatttcga tatccgccgc ggggcgaccg gcgacaacg 39

 <210> 12
 <211> 33
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> primer used in amplification of modified form of BHV-1 gB gene

 <400> 12
 ggaagatctt cagtccgtct tgaccacgcg gtc 33

 <210> 13
 <211> 37
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> oligonucleotide used in ligation of 1492bp fragment from plasmid

T03030" 2449260

pPB28

<400> 13
tcgtgcctgc ggcgcaaggc ccgggcgcgc ctgtagt 37

<210> 14
<211> 37
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in ligation of 1492bp fragment from plasmid
pPB28

<400> 14
ctagactaca ggcgcgcccg ggccttgccg cgcaggc 37

<210> 15
<211> 43
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used to prepare truncated form of BHV-1 gC gene

<400> 15
gcaccgctgc ccgagttctc cgcgaccgcc acgtacgact agt 43

<210> 16
<211> 43
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used to prepare truncated form of BHV-1 gC gene

<400> 16
ctagactagt cgtacgtggc ggtcgcggag aactcgggca gcg 43

<210> 17
<211> 39
<212> DNA
<213> Artificial sequence

<220>
<223> primer used in amplification of modified form of BHV-1 gC gene

<400> 17
aaaatttcga tatcccggcg ggggctcgcc gaggaggcg 39

<210> 18
<211> 32

TOPSECRET-249260

<212> DNA*
 <213> Artificial sequence

 <220>
 <223> primer used in amplification of modified form of BHV-1 gC gene

 <400> 18
 ggaagatctc tagtcgtacg tggcggtcgc gg 32

<210> 19
 <211> 33
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> primer used to amplify truncated gD gene of BHV-1

 <400> 19
 tttctgcaga tgcaagggcc gacattggcc gtg 33

<210> 20
 <211> 31
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> primer used to amplify truncated gD gene of BHV-1

 <400> 20
 tttctagatt agggcgtagc gggggcgggc g 31

<210> 21
 <211> 39
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> primer used to amplify modified form of BHV-1 gD gene

 <400> 21
 aaaatttcga tatccccgc gccgcgggtg acggtatac 39

<210> 22
 <211> 33
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> primer used to prepare modified form of BHV-1 gD gene

 <400> 22
 ggaagatctt tagggcgtag cgggggcggg cgg 33

<223> primer used to amplify G gene of the BRSV Snook strain

<400> 27

acgcgtcgac atgtccaacc atacccatca tc

32

<210> 28

<211> 38

<212> DNA

<213> Artificial sequence

<220>

<223> primer used to amplify G gene

<400> 28

ttaaaatcta gattagatct gtgtagttga ttgatttg

38

<210> 29

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> primer used to amplify truncated form of G gene

<400> 29

ttttaaggat ccgctaaagc caagcccaca tcc

33

$\langle 210 \rangle$ 30

<211> 33

<212> DNA

<213> Artificial sequence

 $\langle 220 \rangle$

<223> primer used to amplify truncated form of G gene

<400> 30

ttaaaatcta gattagatct gtgtagttga ttg

33

<210> 31

<211> 36

<212> DNA

<213> Artificial sequence

 $\langle 220 \rangle$

<223> oligonucleotide used to amplify cDNA of EO gene

<400> 31

cataccgtcg acatgaagaa actagagaaa gccctg

36

 $\langle 210 \rangle$ 32 $\langle 211 \rangle$ 40

<212> DNA

catgacagat cttcaacgtc cegaggtcat ttgttc

36

<210> 37

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the E2 gene

<400> 37

catgacgcgg cgcctatgac gactactgca ttcttg

36

<210> 38

<211> 35

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the E2 gene

<400> 38

catgacagat ctcaagcgaa gtaatcccgg tgggtg

35

<210> 39

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of E2 gene

<400> 39

actgtatcta gaatgaccac cacagctttc ctaatc

36

<210> 40

<211> 39

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of E2

<400> 40

actgtaagat ctttaagtat tcaactccagc acccatagc

39

<210> 41

<211> 41

<212> DNA

<213> Artificial sequence

<220>

0376644-030301

<223> oligonucleotide used in synthesis of E2 gene

<400> 41

catgacgcgg cgcgcctatg accaccacag ctttcctaata c

41

<210> 42

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in synthesis of E2 gene

<400> 42

catgacagat ctttatatga actctgagaa gtagtc

36

<210> 43

<211> 39

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of the cDNA of the E0 gene

<400> 43

cataccgtcg acatgagaaa gaaattggag aaggcactg

39

<210> 44

<211> 39

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of the cDNA of the E0 gene

<400> 44

cataccggat cctcatgctg catgagcacc aaaccatgc

39

<210> 45

<211> 42

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the E0 gene

<400> 45

catgacgcgg ccgctatgag aaagaaattg gagaaggcac tg

42

<210> 46

<211> 39

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the EO gene

<400> 46

cataccagat cttcatgctg catgagcacc aaaccatgc

39

<210> 47

<211> 39

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of cDNA of HN gene

<400> 47

catatcgctcg acatggaata ttggaaacac acaaacagc

39

<210> 48

<211> 38

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of cDNA of HN gene

<400> 48

catgacgata tctagctgca gtttttcgga acttctgt

38

<210> 49

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the HN gene

<400> 49

catactgcgg ccgctttaat tcaagagaac aat

33

<210> 50

<211> 35

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the HN gene

<400> 50

catatcgata tctagctgca gtttttcgga acttc

35

Top Secret

<210> 51
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of cDNA of the F gene

<400> 51
catatcgctcg acatgatcat cacaaacaca atcata 36

<210> 52
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of cDNA of the F gene

<400> 52
catgaccaga tcttattgtc tatttgtcag tatata 36

<210> 53
<211> 42
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis of the F gene

<400> 53
catactgcgg ccgctcaa at agacataaca aaactgcaac gt 42

<210> 54
<211> 41
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis of the F gene

<400> 54
catatcgata tctatgcact agattgatac caacttccaa c 41

<210> 55
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> primer used in the amplification of the gB gene

<213> Artificial sequence

<220>

<223> primer used in the amplification of the gC gene

<400> 60

ttttaaagat ctttaaggcc ccgcctggcg gtagtag

37

<210> 61

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> primer used in the amplification of the truncated form of the gC gene

<400> 61

ttttaaagat ctttaggggg aggcgtcgta gcgctg

36

<210> 62

<211> 39

<212> DNA

<213> Artificial sequence

<220>

<223> primer used in the amplification of the modified form of the gC gene

<400> 62

aaaatttcga tatccacggc gtcggcacg acgccaac

39

<210> 63

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> primer used in the amplification of the gD gene

<400> 63

aattttgata tcatgctgct cgcagcgcta ttggcg

36

<210> 64

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> primer used in the amplification of the gD gene

<400> 64

aattttggat ccctacggac cgggctgcgc ttttag

36

097644-030304
T030304

<210> 65
<211> 40
<212> DNA
<213> Artificial sequence

<220>

<223> primer used in amplification of the truncated form the gD gene

<400> 65

aaatttttga tccctagcgg tggcgcgaga cgcccggcgc 40

<210> 66
<211> 39
<212> DNA
<213> Artificial sequence

<220>

<223> primer used in the amplification of the modified gD gene

<400> 66

aaaatttcga tatccacctt cccccgcgc gcgtaccgc 39

<210> 67
<211> 30
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of the ORF3 gene

<400> 67

cactacgata tcatggctca tcagtgtgca 30

<210> 68
<211> 30
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of the ORF3 gene

<400> 68

cactacagat ctttatcgtg atgtactggg 30

<210> 69
<211> 30
<212> DNA
<213> Artificial sequence

096644-00001-2449260

<210> 74
<211> 30
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of the cDNA of the ORF6 gene

<400> 74

cactcatcta gattaccggc catacttgac 30

<210> 75

<211> 30

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of the ORF6 gene

<400> 75

cactacggat ccgtgtcacg cggccgactc 30

<210> 76

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in amplification of the ORF6 gene

<400> 76

cactacggat ccttaaacag ctcgtttgcc gcc 33

<210> 77

<211> 30

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of the ORF3
gene

<400> 77

cactacgata tcatggttaa tagctgtaca 30

<210> 78

<211> 30

<212> DNA

<213> Artificial sequence

<220>

TEB020"2439260

<223> oligonucleotide used in the amplification of the cDNA of the ORF3 gene

<400> 78
cactactcta gactatcgcc gtacggcact 30

<210> 79
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the cDNA of the ORF5 gene

<400> 79
cactacgata tcatgttgga gaaatgcttg 30

<210> 80
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the cDNA of the ORF5 gene

<400> 80
cactacagat ctctaaggac gacccattg 30

<210> 81
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis of the ORF5 gene

<400> 81
cactacggat ccgccagcaa cgacagcagc tcc 33

<210> 82
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis of the ORF5 gene

<400> 82
cactacggat ccttagacct caactttgcc cct 33

<210> 83
<211> 33
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of the ORF6 gene

<400> 83
cacatcctgc agatgggggc gtccttagat gac 33

<210> 84
<211> 30
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of the ORF6 gene

<400> 84
cacatctcta gattatttgg catatttgac 30

<210> 85
<211> 30
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the ORF6 gene

<400> 85
cactacggat ccgtgagtcg cggccgactg 30

<210> 86
<211> 33
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the synthesis of the ORF6 gene

<400> 86
cactacggat ccttaaacag cttttctgcc acc 33

<210> 87
<211> 30
<212> DNA
<213> Artificial sequence

<220>

<223> oligonucleotide used in the amplification of the cDNA of the HA g

Descriptive statistics		Descriptive statistics	
Variable	Mean (SD)	Variable	Mean (SD)
Age	34.5 (10.2)	Age	34.5 (10.2)
Gender	Male (70%)	Gender	Male (70%)
Marital status	Married (65%)	Marital status	Married (65%)
Education	High school (45%)	Education	High school (45%)
Income	\$15,000 (12,000)	Income	\$15,000 (12,000)
Health status	Good (75%)	Health status	Good (75%)
Stress level	High (60%)	Stress level	High (60%)
Life satisfaction	Low (55%)	Life satisfaction	Low (55%)
Depression	Yes (40%)	Depression	Yes (40%)
Anxiety	Yes (35%)	Anxiety	Yes (35%)
Substance use	Alcohol (20%)	Substance use	Alcohol (20%)
Smoking	Yes (30%)	Smoking	Yes (30%)
Exercise	Regular (15%)	Exercise	Regular (15%)
Diet	Healthy (25%)	Diet	Healthy (25%)
Sleep	Good (40%)	Sleep	Good (40%)
Work	Stable (50%)	Work	Stable (50%)
Family	Supportive (60%)	Family	Supportive (60%)
Community	Engaged (30%)	Community	Engaged (30%)
Religion	Active (20%)	Religion	Active (20%)
Philosophy	Optimistic (45%)	Philosophy	Optimistic (45%)
Values	Materialistic (35%)	Values	Materialistic (35%)
Beliefs	Religious (25%)	Beliefs	Religious (25%)
Attitudes	Positive (50%)	Attitudes	Positive (50%)
Behaviors	Responsible (40%)	Behaviors	Responsible (40%)
Skills	High (30%)	Skills	High (30%)
Knowledge	Good (20%)	Knowledge	Good (20%)
Wisdom	Low (15%)	Wisdom	Low (15%)
Character	Strong (10%)	Character	Strong (10%)
Integrity	High (5%)	Integrity	High (5%)
Honesty	Yes (10%)	Honesty	Yes (10%)
Kindness	Yes (15%)	Kindness	Yes (15%)
Patience	Yes (20%)	Patience	Yes (20%)
Forgiveness	Yes (25%)	Forgiveness	Yes (25%)
Compassion	Yes (30%)	Compassion	Yes (30%)
Generosity	Yes (35%)	Generosity	Yes (35%)
Humility	Yes (40%)	Humility	Yes (40%)
Modesty	Yes (45%)	Modesty	Yes (45%)
Shyness	Yes (50%)	Shyness	Yes (50%)
Timidity	Yes (55%)	Timidity	Yes (55%)
Shyness	Yes (60%)	Shyness	Yes (60%)
Timidity	Yes (65%)	Timidity	Yes (65%)
Shyness	Yes (70%)	Shyness	Yes (70%)
Timidity	Yes (75%)	Timidity	Yes (75%)
Shyness	Yes (80%)	Shyness	Yes (80%)
Timidity	Yes (85%)	Timidity	Yes (85%)
Shyness	Yes (90%)	Shyness	Yes (90%)
Timidity	Yes (95%)	Timidity	Yes (95%)
Shyness	Yes (100%)	Shyness	Yes (100%)

```
<210> 88
<211> 30
<212> DNA
<213> Artificial sequence
```

```
<400> 88
ctccatcaga tcttaaatgc atattctgca 30
```

```
<210> 89
<211> 30
<212> DNA
<213> Artificial sequence
```

<220>
<223> oligonucleotide used in the synthesis of the modified HA gene

```
<400> 89
tccgcggccg cacatgctaa caattccaca 30
```

```
<210> 90
<211> 32
<212> DNA
<213> Artificial sequence
```

<220>
<223> oligonucleotide used in the synthesis of the modified HA gene

```
<400> 90
tccgcggccg cttacattga ttctagtttc ac 32
```

```
<210> 91
<211> 30
<212> DNA
<213> Artificial sequence
```

```
<220>
<223> oligonucleotide used in the amplification of the cDNA of the NA g
ene of the H1N1 strai
```

<400> 91
cacctggtcg acatgaatcc aaatcagaag 30

<210> 92

<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the cDNA of the NA gene

<400> 92
cacctgtcta gactacttgt caatggtgaa 30

<210> 93
<211> 31
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis fo the modified form of the NA gene

<400> 93
cactacgaat tcacaaattg ggaatcaaaa t 31

<210> 94
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis fo the modified form of the NA gene

<400> 94
aatttgtgaa ttcgcggccg cggatccggt 30

<210> 95
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the HA gene

<400> 95
ctgcacgtcg acatgaagac tgtcattgcc 30

<210> 96
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the HA gene of the H

096644-03004
T00037-2449460

3N2` strai

<400> 96
gatatctcag atgcaaattgt tgca 24

<210> 97
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis of the modified form of the
HA gene

<400> 97
caccgcggat cccttcaga aaatggcagc aca 33

<210> 98
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the synthesis of the modified form of the
HA gene

<400> 98
caccgcggat ccttagtctt tgtatcccga ctt 33

<210> 99
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the cDNA of the NA g
ene

<400> 99
cactcagata tcatgaatcc aaagcaaaag 30

<210> 100
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide used in the amplification of the cDNA of the NA g
ene

<400> 100
cactcatcta gattatatag gcatgagatc 30

0976443 030303

$\langle 220 \rangle$

<223> oligonucleotide used in the amplification of the cDNA of the porcine GM-CSF gene

<400> 105

catatcgtcg acatgtggct gcagaacctg cttctc

36

<210> 106

<211> 37

<212> DNA

<213> Artificial sequence

 $\langle 220 \rangle$

<223> oligonucleotide used in the amplification of the cDNA of the porcine GM-CSF gene

<400> 106

catgaccaga tcttcacttc tgggctgggt cccagca

37

Variable	Mean	SD	Min	Max
Age	38.5	10.2	22	65
Gender	0.5	0.5	0	1
Marital status	0.7	0.5	0	1
Education	12.5	1.5	9	16
Income	15.2	5.8	5	35
Occupation	1.2	0.8	0	2
Health status	1.8	0.9	1	3
Stress level	2.5	1.2	1	4
Life satisfaction	3.2	1.5	1	5
Resilience	2.8	1.1	1	4
Optimism	3.5	1.3	1	5
Gratitude	3.8	1.4	1	5
Forgiveness	3.6	1.3	1	5
Empathy	3.4	1.2	1	5
Compassion	3.3	1.1	1	5
Kindness	3.1	1.0	1	5
Generosity	3.0	0.9	1	5
Patience	2.9	0.8	1	5
Self-control	2.7	0.7	1	5
Emotional stability	2.6	0.6	1	5
Psychological well-being	2.5	0.5	1	5
Life purpose	2.4	0.4	1	5
Meaning in life	2.3	0.3	1	5
Existential well-being	2.2	0.2	1	5
Overall well-being	2.1	0.1	1	5